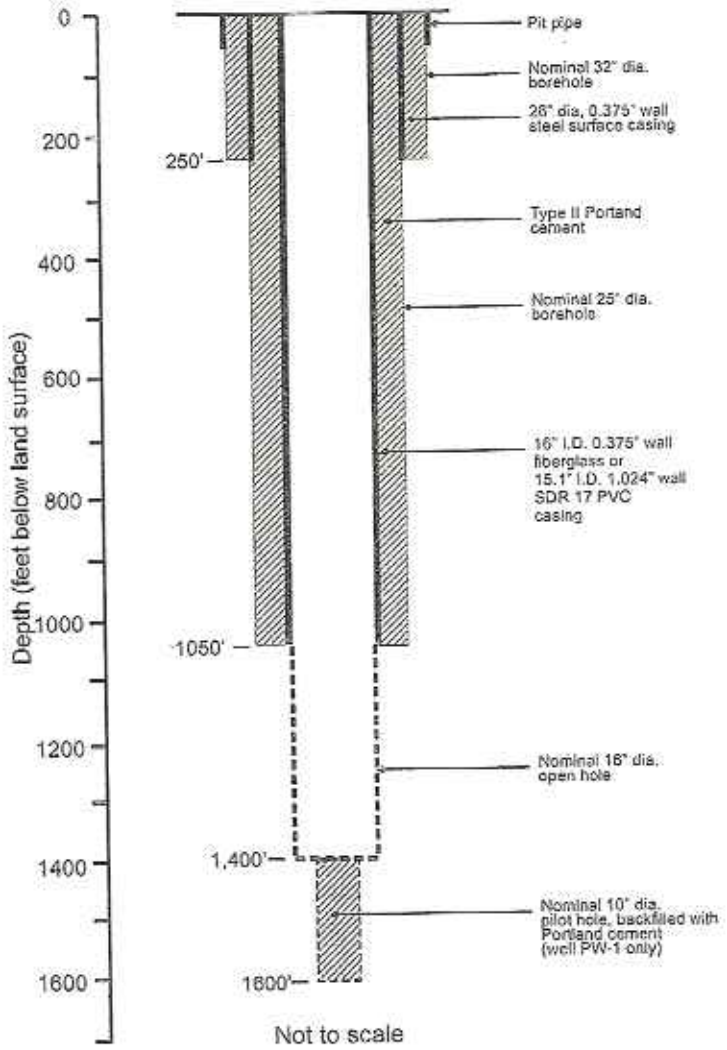
The Water Cycle for Clewiston Utilities

Presentation for the City Commission
January 14, 2010 Workshop

The beginning- Brackish water from 4 wells over 800 feet deep



Passing through prefilters. Entire process run from these computers

Reverse Osmosis Skids
3-1million gallon per day skids

Clearwell for chemical addition and degasification towers

Chemical Tanks
Chlorine, Ammonia, Fluoride, Zinc Orthophosphate

1.5 million gallon storage tank
5- Distribution pumps

Water Plant Project Manager
Chuck Hale

Water Plant Operator Jay

Concentrated brine down injection well

Distribution points– Clewiston and Southshore Water

Distribution System

- Clewiston's Distribution system consists of approximately 66 miles of pipe varying from 2 inch (30%) to 12 inch (7%).
- Materials include: galvanized steel, cast iron, ductile iron, transite, PVC and polyethylene.
- Over 500 isolation valves- required to be exercised annually- 710 man hours
- 3700 water meters- about 200 per day read monthly by one meter reader
- 1000 kw Generator at Water Plant

O&M

- Maintenance, rereads, meter change outs and water main replacements are accomplished with the 4 man water/sewer crew and 1 supervisor.
- Over 2500 work orders were completed in 2009
- 1855 were water rereads consuming approximately 464 man hours

W Circle water break

W Circle water break with Terry Throop and Kelmer Story

Mississippi water break with Terry Lowman and Kelmer Story

Mississippi water break

Mississippi water break

Sewer System

- 37 miles of sewer main
- Materials Clay pipe and PVC
- 752 manholes
- 50 lift stations- 2 pumps per lift station 295 connected hp
- 3377 service connections
- 2- 45 kw Generators, 1- 80 kw Generator
- 1 125 kw Generator
- 1 250 kw Generator at Main Lift Station

Lift Station Panel

Sewer Expansion Project

- Provides last 250 customers with sewer service
- Adds 4 lift stations
- 79 manholes
- 4.2 miles of sewer main

Lift station prior to installation

Lift station and manhole

Storm drain conflict box

Sewer main

Bubba's bird sactuary

Water line relocation & Hydrant replacement

Typical Service Run

3 Phase lift station service

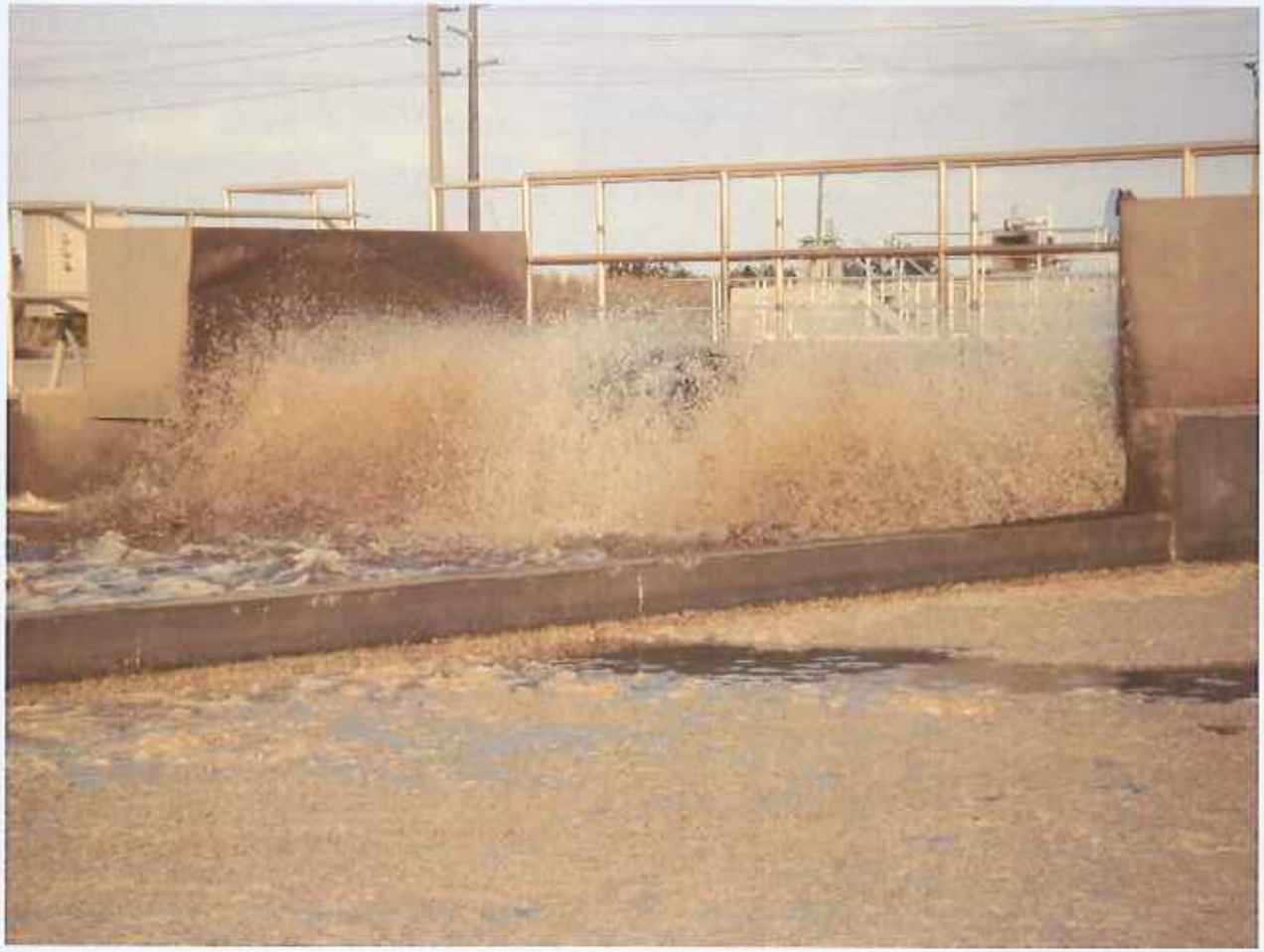
Laurel Paving

Sewer Plant

John Hamilton with Scott Eckler

Headworks with bar screen out of service

Oxidation Ditch



Clarifier

Flow channel prior to ponds

Digester- prior to hauling

Polishing ponds

Portable centrifuge- sludge hauling

Major Capital Projects

- The City has completed several major capital projects- under budget, without advalorem tax dollars increasing the quality of the services provided, improving the efficiency of operations and mitigating damage from hurricanes.
- You have seen the water treatment plant- a $22 million dollar, 40% grant funded, project that provides the best quality drinking water available from a Municipal System.

Major Capital Projects

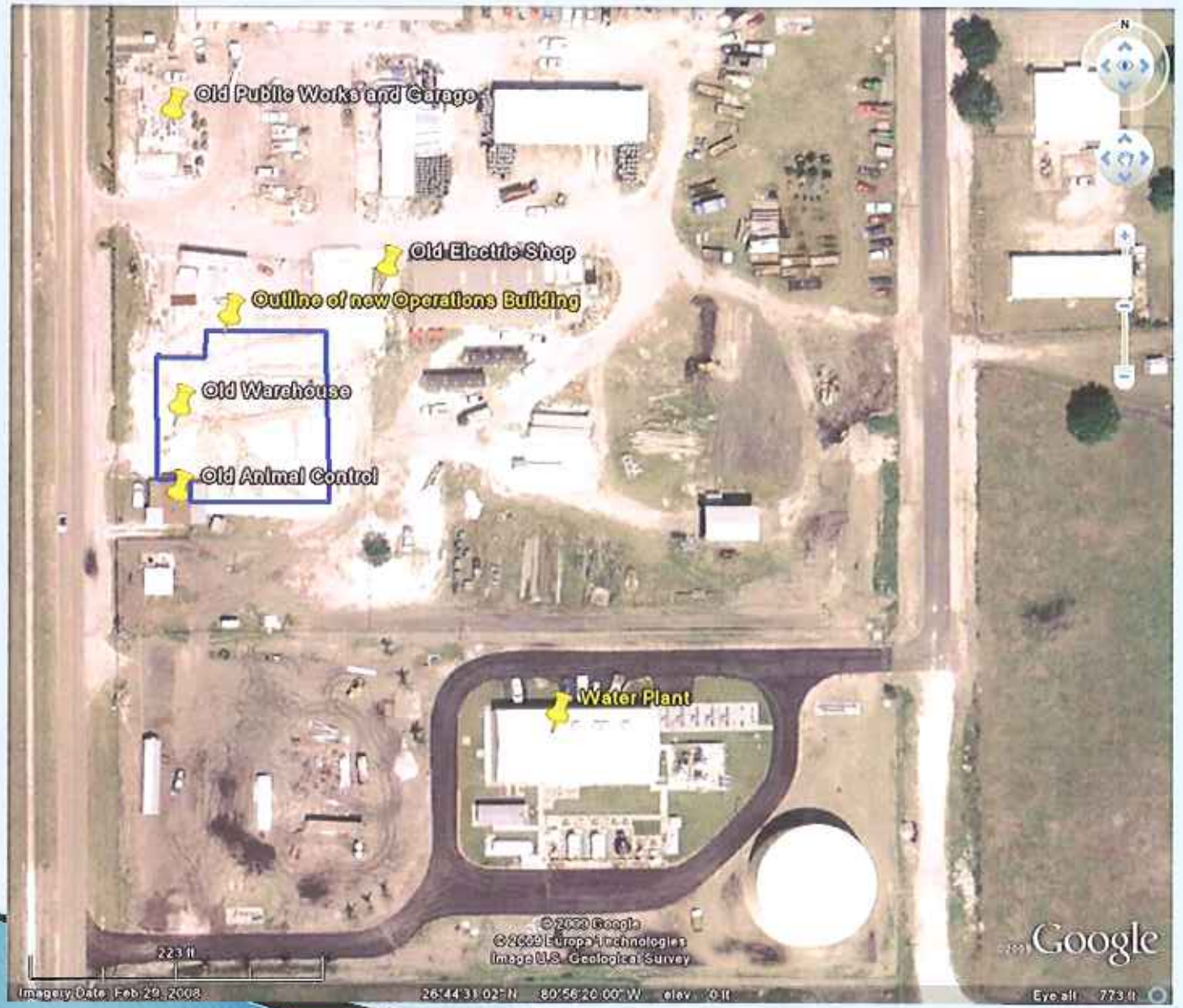
- The sewer expansion project- a $3 million dollar expansion, over 50% grant funded, that will make sewer available to the last 250 properties in the City that have not had central sewer available. Providing commercial and industrial opportunities for expansion.

Major Capital Projects

- The Frank Jones operations building- a $1.5 million dollar project that combines 3 buildings destroyed be Wilma into one central location built to withstand 102 mph winds.
- Locates several departments under one roof and provides one managed warehouse location for Utility inventory saving time, centralizing stock purchasing and reducing losses.

City Complex 2006- Post Wilma

City Complex 2008



City Complex 2010 Utility Funded Improvements

Questions?